

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

SEMicro

University of Maryland Manufacturing Assistance Program

SEMicro Develops Compact PATTI Adhesion Test Instrument

Client Profile:

SEMicro, a division of Myron Eugene Taylor Engineering, specializes in the design, development and manufacturing of adhesive testing equipment. SEMicro provides a full line of instruments to test the strength of coatings, adhesives, paints and inks. SEMicro is the home of the original PATTI - the Pneumatic Adhesion Tensile Testing Instrument. After its emergence in 1985, the PATTI became the standard of quality throughout the paint and coatings industry. The company employs 3 people at its facility in Rockville, Maryland.

Situation:

SEMicro wanted to develop a smaller compact PATTI that took advantage of digital technology. The company approached the University of Maryland Manufacturing Assistance Program (UMMAP), a NIST MEP network affiliate, formerly known as Maryland Technology Extension Service, for assistance in converting from analog to digital technology.

Solution:

UMMAP reviewed the current PATTI design and discussions followed on how to re-engineer the existing electronic design. UMMAP subsequently introduced SEMicro to two Maryland companies who perform detailed electronic design. UMMAP reviewed proposals from the two companies and provided comments and recommendations. SEMicro selected one of the companies to develop the detailed electronic design for the new compact PATTI. UMMAP met with SEMicro regularly to review the design and development effort and offered suggestions for improving the process. The compact PATTI (Quantum-Gold) instrument that resulted from the development effort was on the market during the first quarter of 2009. Innovations include a fully digital unit, Bluetooth, custom made LabView software, and a digital microscope camera to fully document the test surface. In addition many components were miniaturized so that the new compact PATTI could fit in a cigar box and weigh less than 3 pounds. The PATTI Quantum Gold Series premiered at the 2009 PACE (Paint and Coating Expo) in February, 2009 in New Orleans.

Results:

* Projected sales increase of \$100,000.

Testimonial:

"As a result of UMMAP assistance, SEMicro has an advanced PATTI adhesion testing instrument and is predicting a significant increase in overall sales because of the new product."

Robert Hester, VP Technical Development

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